

**APPARATUS AND METHOD FOR REDUCING NOISE****ABSTRACT**

In accordance with the present invention, an apparatus and method for reducing noise in a vehicle is provided. The apparatus uses an interferometer disposed in a headset to measure the sound proximate the driver's ears. An equal and opposite sound is generated and transmitted to the ear thereby reducing the level of noise audible to the driver. A microphone may be provided to make a separate measurement of the background noise to facilitate the noise reduction. A tracking device may be used to find and track the location of the driver's ears.

**(Fig. 1)**